

O.H.M.S.

W. J. Gerald
Deputy Minister.

LABORATORY
OF THE
INLAND REVENUE DEPARTMENT
OTTAWA, CANADA.

BULLETIN No. 196

ALE AND LAGER BEER

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OF THE
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BULLETIN No. 196

ALE AND LAGER BEER

W. J. GERALD, Esq.,
Deputy Minister of Inland Revenue.

OTTAWA, January 5, 1910.

SIR,—I beg to hand you herewith the results of analysis of 140 samples sold as Ale (Beer) and Lager Beer, throughout Canada, in July and August of 1909. These may be classified as follows:—

Ale.....	73 samples.
Lager Beer.....	67 "

140

Of the samples sold as Ale or Beer, two samples, viz.: Nos. 39503 and 36774 contain such small amounts of alcohol, as to exclude them from recognition as Ale; they properly belong to the class of non-alcoholic beverages. Two other samples, viz.: 39504 and 39505, sold as Root-beer and Ginger Beer, respectively, yet contain alcohol equivalent to more than four per cent of proof spirit, and on this account should be regarded as alcoholic beverages, although they are not Malt Liquors.

Our last systematic examination of Malt Liquors was made in 1897, and is reported in Bulletin No. 52. The specific gravity of original worts has been determined by the method authorized for Excise purposes (C. 249), and direct comparison may therefore be instituted between the present report, and that printed as Bulletin 52.

We have no legalized definitions for the articles known as Ale (Beer) and Lager Beer. The report now furnished, together with that of 1897, contains data which will be useful in formulating standards for Malt Liquors; and I would respectfully recommend its publication as Bulletin No. 196.

I have the honour to be, sir,
Your obedient servant,

A. MCGILL,
Chief Analyst.

Date of Collection.	Nature of Sample	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity	Cents.		

DISTRICT OF NOVA SCOTIA—

1909.							
Aug. 16	Beer or Ale	41726	A. Keith & Son, Halifax, N.S.	3 qts.	...	Vendors	Pale Ale.
" 16	"	41727	Halifax Breweries Ltd., Halifax, N.S.	3 "	...	Vendors	Howard's Ale
" 16	"	41728	Oland & Son, Halifax, N.S.	3 "	...	Vendors	Pale Ale.
" 16	"	41729	Crystal Spring Mineral Waters Co., Halifax N.S.	3 "	...	Vendors	Ramey's Pilsener Beer.
" 16	"	41730	Kelley & Glassey, Halifax, N.S.	3 "	75	McEwan & Co., Edinburgh, Scotland.	India Pale Ale.

DISTRICT OF PRINCE EDWARD ISLAND—

July 19	Beer or Ale.	38541	J. & F. Morris, Charlottetown.	3 qts.	60	John Labatt, London, Ont.	.....
" 19	"	38442	Halifax Brewing Co., Charlottetown.	3 "	75	Halifax Brewing Co., Halifax, N.S.	.....
" 19	"	38543	McDonald & McKinnon, Charlottetown.	3 "	75	John Labatt, London, Ont.	.....
" 19	"	38544	A. W. Reddin, Charlottetown.	3 "	75	James Ready, Fairville, N.S.	.....
" 19	"	38545	Byrne Bros., Charlottetown.	3 "	90	Bass & Co., London, Eng.	.....

DISTRICT OF NEW BRUNSWICK—

July 19	Beer or Ale.	39501	Simeon Jones, Ltd., St. John's, N.B.	3 qts.	50	Vendors	"Red Ball" India Pale Ale.
" 21	"	39502	James Ready, Ltd., St. John's, N.B.	3 "	50	Vendors	Ready's Pale Ale
" 19	Ginger Beer	39503	Dolan Bros., St. John's, N.B.	3 bots.	60	Vendors	Labelled Stone Ginger Beer.
" 20	Root Beer.	39504	W. B. Daley, St. John's, N.B.	3 "	15	Vendors	Labelled Root Beer.
Aug. 6	Ginger Beer	39505	S. H. McKee & Sons, Fredericton, N.B.	3 "	30	Vendors	Labelled Stone Ginger Beer.

DISTRICT OF QUEBEC—

July 15	Beer or Ale.	36772	E. A. Delisle, 29 Cote St. Geniève.	3 bots.	35	G. E. Amiot, Quebec	.....
" 15	"	36773	V. Lacasse, Rue St. Clair.	3 "	35	Proteau & Carignan, Quebec.	.....
" 15	"	36774	Jule Rochette, 7 Rue Deligny.	3 "	35	T. B. Renaud & Co., Quebec.	.....
" 15	"	36775	Jule Rochette, 7 Rue Deligny.	3 "	35	Boswell, Quebec.	.....
" 15	"	36776	Jule Rochette, 7 Rue Deligny.	3 "	35	G. E. Amiot, Quebec	.....

ALE (BEER).

RESULTS OF ANALYSIS.

Sp. Gr. at 15° 5'	Sp. Gr. of Distillate at 15° 5'	Sp. Gr. of Decolourized residue.	Alcohol.			Sp. Gr. of Original Wort.	Malt used, lbs. per Gallon.	Total Solids in Beer (determined).	Residual Solids (from tables).	Solids in Original Wort.	Degree of Fermentation.	Preservatives.	No. of Sample.	Remarks the C ^o . Analyst.
			By Weight.	By Volume.	As proof spirit.									

R. J. WAUGH, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.				
1-0065	0-9908	1-0153	5-37	6-71	11-76	1-0555	2-50	3-76	3-81	13-90	72-6	.....	41726	
1-0067	0-9817	1-0161	6-07	7-57	13-27	1-0617	2-78	3-83	4-01	15-47	74-1	.....	41727	
1-0088	0-9914	1-0164	5-00	6-24	10-94	1-0534	2-40	3-94	4-09	13-37	69-4	.....	41728	
1-0014	0-9951	1-0058	2-78	3-49	6-10	1-0249	1-12	1-34	1-44	6-21	76-9	.....	41729	
1-0047	0-9896	1-0146	6-10	7-61	13-34	1-0604	2-72	3-59	3-65	15-15	75-9	.....	41730	

THEO. MOORE, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.				
1-0141	0-9952	1-0184	2-72	3-42	5-98	1-0370	1-67	4-43	4-59	9-25	50-3	.....	38541	
1-0141	0-9904	1-0134	5-62	7-01	12-30	1-0556	2-50	3-28	3-34	13-93	76-0	.....	38542	
1-0103	0-9926	1-0187	4-25	5-32	9-31	1-0494	2-22	4-24	4-58	12-36	62-9	.....	38543	
1-0071	0-9899	1-0168	6-00	7-46	13-11	1-0615	2-77	4-12	4-19	15-42	72-1	.....	38544	
1-0037	0-9895	1-0192	6-21	7-74	13-57	1-0657	2-96	4-51	4-79	16-48	70-9	.....	38545	

J. C. FERGUSON, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.				
1-0070	0-9917	1-0152	4-81	6-02	10-54	1-0596	2-28	3-58	3-79	12-67	62-1	Salicylic acid.	39501	
1-0051	0-9899	1-0151	5-94	7-40	12-97	1-0568	2-69	3-47	3-76	14-99	74-9	Sulphites	39502	
1-0287	0-9980	1-0307	1-06	1-34	2-34	.....	7-20	.....	.....	.....	.....	.....	39503	Is not Beer.
0-9977	0-9962	1-0017	2-17	2-72	4-76	.....	.....	.....	.....	.....	.....	.....	39504	
1-0107	0-9959	1-0151	2-33	2-93	5-13	.....	2-99	.....	.....	.....	.....	.....	39505	

E. BELAND, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.				
1-0094	0-9927	1-0169	4-19	5-24	9-18	1-0471	2-20	4-02	4-21	11-79	64-3	.....	36772	
1-0122	0-9926	1-0196	4-25	5-32	9-31	1-0503	2-26	4-50	4-89	12-59	61-1	Salicylic acid.	36773	
1-0003	0-9976	1-0024	1-31	1-65	2-89	1-0106	0-48	0-48	0-60	2-64	2-2	.....	36774	Is not Beer.
1-0048	0-9911	1-0136	5-19	6-48	11-35	1-0522	2-35	3-15	3-39	13-07	74-0	.....	36775	
1-0095	0-9927	1-0171	4-19	5-24	9-18	1-0473	2-13	4-08	4-26	11-84	64-0	.....	36776	

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report (Is not expression of opinion.)
				Quantity.	Cents.		

DISTRICT OF ST. HYACINTHE—

1900							
July 20	Beer or Ale.	947	N. Lord, St. Jean.	3 bots.	45	Labatt, London, Ont.	
" 21	"	948	J. Rivet, Sorel.	3 "	40	J. H. R. Molson & Bros., Montreal.	
" 22	"	949	J. L. H. Houde, Nicolet.	3 "	30	Rock Springs Brewery, Quebec.	
Aug. 2	"	950	J. Beauregard & freres, Windsor Mills.	3 "	45	Silver Springs Brewery, Sherbrooke.	
" 3	"	951	Silver Springs Brewery, Ltd., Sherbrooke.	3 "	....	Vendors.	

DISTRICT OF MONTREAL—

July 15	Beer or Ale.	40245	Reinhardt & Sons, Montreal.	3 bots.	30	Vendors.	XXX Pale Ale.
" 15	"	40246	The Nat. Breweries Ltd., Montreal.	3 "	20	"	Ecker's Indian Pale Ale.
" 16	"	40248	Dawes & Co., La Chine, P.Q.	3 "	25	"	Black Horse, India Pale Ale.
" 17	"	40249	R. Martel, 51 Vitre st., Montreal.	3 "	31	Jno. H. R. Molson & Bros.	India Pale Ale.
" 17	"	40252	"	3 "	31	Beauport Brewing Co	"

DISTRICT OF OTTAWA—

Aug. 23	Beer or Ale.	41244	The Carling B. & M. Co., Ltd., Ottawa.	3 qts.	38	Vendors.	Pale Bitter Ale.
" 23	"	41245	Dawes & Co., Ltd., Ottawa.	2 "	36	"	Dawes India Pale Ale.
" 23	"	41246	Capital Brewing Co., Ltd., Ottawa.	3 "	40	"	Capital Ale.
" 23	"	41247	L. Davis, Ottawa.	3 "	40	O'Keefe's, Ltd., Toronto.	O'Keefe's "Amber" Ale.
" 23	"	41248	John Labatt, Ottawa.	3 "	38	Vendor.	India Pale Ale.
" 23	"	41281	"	3 "	40	"	"Extra Stock"

DISTRICT OF KINGSTON—

Aug. 5	Beer or Ale.	41160	John Fisher, Port Hope.	3 bots.	45	Vendor.	
" 5	"	41161	R. J. Lawler, Kingston.	3 "	45	J. McCarthy & Son, Prescott.	
" 5	"	41162	J. McParland, Kingston.	3 "	45	Labatt's, London.	
" 6	"	41163	James Roy, Belleville.	3 "	40	Vendor.	
" 6	"	41164	Port Hope B. & M. Co.	3 "	45	Vendors.	

ALE (BEER).

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RESULTS OF ANALYSIS

Sp. Gr. at 15°.	Sp. Gr. of Distillate at 15°.	Sp. Gr. of Decalcified residue.	Alcohol.			Sp. Gr. of Original Wort.	Malt used, lbs. per Gallon.	Total Solids in Beer (determined).	Residual Solids (from tables).	Solids in Original Wort.	Degree of Fermentation.	Preservatives.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
			By Weight.	By Volume.	As proof spirit.									
J. C. ROULEAU, INSPECTOR.														
			p. c.	p. c.	p. c.				p. c.	p. c.				
1.0082	0.9920	1.0163	4.62	5.78	10.13	1.0500			4.06	12.52	67.5		537	
1.0043	0.9914	1.0127	5.00	6.24	10.94	1.0497			3.16	12.44	74.5		948	
1.0006	0.9929	1.0166	4.12	5.16	9.04	1.0463			4.14	11.58	64.2		949	
1.0074	0.9930	1.0146	4.00	5.00	8.77	1.0434			3.40	10.85	66.4		950	
1.0070	0.9927	1.0163	4.19	5.24	9.18	1.0465			3.41	11.63	65.1		961	

J. J. COSTIGAN, INSPECTOR.

1.0006	0.9935	1.0101	3.71	4.63	8.13	1.0365	1.04	2.20	2.52	9.12	72.3		40245	
1.0094	0.9922	1.0173	4.50	5.63	9.86	1.0500	2.25	4.00	4.31	12.52	65.5		40246	
1.0054	0.9914	1.0138	5.00	6.24	10.94	1.0508	2.20	3.07	3.44	12.72	72.1	Trace of salicylic acid.	40248	
1.0061	0.9914	1.0144	5.00	6.24	10.94	1.0514	2.31	3.56	3.59	12.87	72.1	"	40249	
1.0091	0.9927	1.0167	4.19	5.24	9.18	1.0469	2.11	3.72	4.16	11.74	64.5		40252	

J. A. RICKEY, INSPECTOR.

1.0007	0.9911	1.0182	5.06	6.32	11.06	1.0558	2.51	4.31	4.56	13.98	67.4		41244	
1.0073	0.9939	1.0153	5.31	6.63	11.62	1.0550	2.48	3.51	3.81	13.78	72.3		41245	
1.0061	0.9911	1.0140	4.81	6.02	10.54	1.0494	2.22	3.49	3.37	12.36	71.8		41246	
1.0101	0.9927	1.0174	4.19	5.24	9.18	1.0476	2.14	4.11	4.34	11.91	63.6		41247	
1.0097	0.9916	1.0175	4.87	6.10	10.67	1.0534	2.40	4.22	4.36	13.37	67.4		41248	
1.0097	0.9913	1.0181	5.06	6.32	11.06	1.0556	2.50	4.28	4.51	13.93	67.6		41281	

JAS. HOGAN, INSPECTOR.

1.0066	0.9904	1.0157	5.62	7.01	12.30	1.0579	2.61	3.72	3.91	14.51	73.0		41160	
1.0079	0.9904	1.0171	5.62	7.01	12.30	1.0593	2.67	4.20	4.26	14.86	71.3		41161	
1.0080	0.9917	1.0163	4.81	6.02	10.54	1.0517	2.33	3.77	4.06	12.94	68.6		41162	
1.0061	0.9917	1.0141	4.81	6.02	10.54	1.0495	2.23	3.18	3.51	12.30	71.7		41163	
1.0081	0.9909	1.0165	5.31	6.63	11.62	1.0562	2.52	4.02	4.11	14.08	70.8		41164	

BULLETIN No. 196—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

DISTRICT OF TORONTO—

1909.							
Aug. 3	Beer or Ale.	41329	Taylor & Bates, St. Catherine's.	3 qts.	50	Vendors	India Pale Ale.....
" 11	"	41330	Grant's Springs Brewery Co., Ltd., Hamilton.	3 "	40	"	East India Pale Ale..
" 18	"	41331	Clooney Estate, 928 Bloor Street West, Toronto.	3 "	45	The Dom. Breweries Co., Ltd., Toronto.	India Pale Ale.....
" 18	"	41332	J. H. King, 112-116 Dundas St., Toronto.	3 "	45	Toronto B. & M. Co., Ltd., Toronto.	Pale Ale.....
" 18	"	41333	J. L. Starkey, 837 Queen Street West, Toronto.	3 "	45	The Cosgrove Brewing Co., Ltd., Toronto.	"

DISTRICT OF LONDON—

July 22	Beer or Ale.	30686	C. J. Watson, Guelph	3 bots.	75	Halliday Bros., Guelph.	East Kent Ale.
" 23	"	30692	Walsh Bros., Stratford.	3 "	45	John Labatt, London, Ont.	.....
" 25	"	30802	Walter Sauits, Goderich.	3 "	40	Berlin Brewing Co., Berlin, Ont.	Pilsener Beer.....
" 29	"	30813	Chas. B. Pugh, Clinton.	3 "	30	Cosgrove Brewing Co., Toronto.	.....

DISTRICT OF WINDSOR—

July 23	Beer or Ale.	35980	J. H. Price, St. Thomas.	3 qts.	50	Rudolph & Begg, St. Thomas	.....
" 23	"	35981	J. H. Price, St. Thomas.	3 "	50	Cosgrove Brewing Co., Toronto.	.....
" 23	"	35982	A. E. Ponsford, St. Thomas.	3 "	50	John Labatt, London.	.....
" 23	"	35983	A. E. Ponsford, St. Thomas.	3 "	50	Carling B. & M. Co., London.	.....
" 23	"	35984	E. J. Butler, St. Thomas.	3 "	50	Walkerville Brewing Co., Walkerville..	.....

DISTRICT OF MANITOBA—

July 23	Beer or Ale.	39741	P. Shea, Winnipeg.	3 qts.	50	McDonagh & Shea, Winnipeg, Man.	India Pale Ale.....
" 26	"	39742	Geo. Vette	3 "	75	Bas & Co. (Bottled by C. C. Hibbert & Co., London, Eng.)	Pale Ale.....
" 26	"	39743	Green & Co.	3 "	75	The Empire Brewing Co., Ltd., Brandon	Empire Ale.....

ALE (BEER).

RESULTS OF ANALYSIS.													Remarks and Opinion of the Chief Analyst.
Sp. Gr. at 15.5°.	N. Gr. of Distillate at 15.5°.	Sp. Gr. of Dealcologized residue.	Alcohol.		Sp. Gr. of Original Wort.	Malt used, lbs. per Gallon.	Total Solids in Beer (determined).	Residual Solids (from tables).	Solids in Original Wort.	Degree of Fermentation.	Preservatives.	No. of Sample.	
			By Weight.	By Volume.	As Proof Spirit.								

H. J. DAGER, INSPECTOR.

			p. c.	p. c.	p. c.		p. c.	p. c.	p. c.				
1.0087	0.9918	1.0268	4.75	5.91	10.49	1.0516	2.32	3.74	4.19	12.92	67.5	.....	41329
1.0143	0.9916	1.0224	4.87	6.10	10.67	1.0583	2.62	5.39	5.59	14.61	61.7	.....	41330
1.0078	0.9902	1.0169	5.75	7.17	12.57	1.0601	2.70	4.02	4.21	15.06	72.0	.....	41331
1.0082	0.9912	1.0165	5.12	6.40	11.21	1.0545	2.73	4.08	4.11	13.65	69.9	.....	41332
1.0073	0.9902	1.0163	5.37	6.71	11.76	1.0565	2.54	3.78	4.06	14.15	71.3	.....	41333

T. KIDD, INSPECTOR.

1.0033	0.9912	1.0121	5.12	6.40	11.21	1.0501	2.25	2.88	3.01	12.54	75.9	.....	30686
1.0079	0.9920	1.0164	4.62	5.78	10.13	1.0501	2.25	3.75	4.09	12.54	67.4	.....	30692
1.0145	0.9941	1.0205	3.35	4.20	7.36	1.0441	1.98	4.84	5.11	11.03	53.6	.....	30802
1.0063	0.9908	1.0171	5.37	6.71	11.76	1.0573	2.58	3.92	4.26	14.36	73.1	.....	30813

JNO. TALBOT, INSPECTOR.

1.0171	0.9926	1.0245	4.25	5.32	9.31	1.0532	2.48	5.84	6.11	13.83	55.8	.....	35980
1.0055	0.9905	1.0148	5.56	6.94	12.16	1.0565	2.54	3.58	3.69	14.15	73.9	Sulphites	35981
1.0109	0.9925	1.0181	4.31	5.39	9.45	1.0493	2.22	4.16	4.51	12.34	63.4	"	35982
1.0072	0.9913	1.0157	5.06	6.32	11.08	1.0532	2.39	3.58	3.91	13.32	70.6	"	35983
1.0067	0.9915	1.0150	4.94	6.17	10.81	1.0515	2.32	3.40	3.74	12.89	71.0	"	35984

A. C. LARIVIERE, INSPECTOR.

1.0086	0.9921	1.0165	4.56	5.71	9.99	1.0497	2.23	3.75	4.11	12.44	66.9	.....	39741
1.0084	0.9895	1.0186	6.21	7.74	13.57	1.0651	2.03	4.28	4.64	16.33	71.6	.....	39742
1.0128	0.9924	1.0199	4.37	5.47	9.58	1.0516	2.32	4.83	4.96	12.92	61.6	.....	39743

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report (is not an expression of opinion).
				Quantity.	Cents.		

DISTRICT OF CALGARY—

1909.							
July 29.	Beer or Ale.	3573	Calgary B. & M. Co. Calgary.	3 qts.	50	Vendors.....	
Aug. 7.	"	3575	Great West Liquor Co., Calgary.	"	75	Edward L. Drewery, Winnipeg.	
" 7.	"	3576	Calgary Wine & Spirit Co., Calgary.	"	75	Bass & Co., London, Eng.	
" 10.	"	3577	Edmonton B. & M. Co., Calgary.	"	50	Vendors.....	
" 10.	"	3560	Edmonton Wine & Spirit Co., Calgary.	"	60	Bass & Co., London, Eng.	

DISTRICT OF VANCOUVER—

July 20.	Beer or Ale.	37681	Royal Brewing Co., Vancouver, B.C.	3 qts.	50	Vendors.....	XXX brand.....
" 20.	"	37682	Pacific Bottling Works, Vancouver.	"	60	Seattle B. & M. Co., Seattle, Wash.	
" 20.	"	37683	McLaren & Urquhart Vancouver.	"	60	Calgary Brewing Co., Calgary, Alta.	Bottled by A. E. Suckling & Co., Vancouver.
" 20.	"	37684	Hughes Bros., Vancouver.	"	45	Vancouver Brewries, Vancouver.	Alexandra.....
" 20.	"	37685	A. E. Suckling, Vancouver.	"	60	Olympia Brewing Co., Olympia, Wash.	Olympia.....

DISTRICT OF VICTORIA—

Aug. 5.	Beer or Ale.	41521	Windsor Grocery Co., Victoria, B.C.	3 qts.	45	Victoria Phoenix Brewing Co., Victoria, B.C.	Victoria Phoenix Ale.
" 5.	"	41522	Saunders Grocery Co., Ltd., Victoria.	"	75	Bass & Co., Burton-on-Trent, Eng.	Pale Ale. Bottled by Blood, Wolfe & Co., Liverpool.
" 6.	"	41523	West End Grocery Co., Ltd., Victoria.	"	50	Labatt's, London, Ont.	India Pale Ale.....
" 6.	"	41524	Fred Carue, Victoria.	"	50	Silver Spring Brewery Co., Victoria, B.C.	Tates English Ale ...
" 9.	"	41525	Copas & Young, Victoria.	"	50	Bass & Co., Burton-on-Trent, Eng.	Bottled by E. & J. Bourke, Dublin & Liverpool.

ALE (BEER).

RESULTS OF ANALYSIS.

Sp. Gr. at 15°	Sp. Gr. of Distillate at 15°	Sp. Gr. of Decolcolized residue	Alcohol.			Sp. Gr. of Original Wort.	Malt used, lbs. per Gallon.	Total Solids in Beer (determined).	Residual Solids (from tables).	Solids in Original Wort.	Degree of Fermentation.	Preservatives.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
			By Weight.	By Volume.	As proof spirit.									

R. W. FLETCHER, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.				
1-0063	0-9901	1-0148	5-81	7-25	12-70	1-0595	2-63	3-99	3-69	14-66	74-8		35573	
1-0083	0-9909	1-0171	5-31	6-03	11-63	1-0568	2-55	4-21	4-26	14-23	70-0		35575	
1-0014	0-9880	1-0108	7-27	9-04	15-85	1-0651	2-83	2-48	2-69	16-83	83-5		35576	
1-0012	0-9906	1-0104	5-50	6-66	12-03	1-0516	2-32	2-40	2-50	12-02	79-9		35577	
1-0021	0-9879	1-0128	7-33	9-13	15-99	1-0677	3-04	3-21	3-19	16-98	81-2		35600	

J. F. POWER, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.				
1-0033	0-9935	1-0098	3-71	4-03	8-13	1-0362	1-63	2-30	2-41	9-05	7-30		37681	
1-0120	0-9923	1-0195	4-44	5-55	9-72	1-0517	2-33	4-63	4-86	12-04	62-4		37682	
1-0192	0-9942	1-0243	3-29	4-12	7-23	1-0474	2-13	6-12	6-06	11-86	48-9		37683	
1-0133	0-9926	1-0205	4-25	5-32	9-31	1-0612	2-30	4-84	5-11	12-82	60-0	Sulphites	37684	
1-0115	0-9925	1-0188	4-31	5-39	9-45	1-0500	2-25	4-44	4-69	12-52	62-5		37685	

D. O'SULLIVAN, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.				
1-0117	0-9951	1-0179	2-22	2-79	4-89	1-0326	1-47	4-38	4-46	8-14	45-2		41521	
1-0034	0-9885	1-0143	6-93	8-62	15-12	1-0608	2-74	3-39	3-56	15-24	76-6		41522	
1-0089	0-9914	1-0161	5-00	6-24	10-94	1-0531	2-39	4-12	4-01	13-30	69-9		41523	
1-0079	0-9922	1-0150	4-50	5-63	9-86	1-0477	2-15	3-89	3-74	11-94	68-7		41524	
1-0064	0-9905	1-0158	5-56	6-94	12-16	1-0575	2-59	3-60	3-94	14-41	72-6		41525	

BULLETIN No. 196—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Covr.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not expression of opinion).
				Quantity.	Cents.		

DISTRICT OF NOVA SCOTIA—

1909.							
Aug. 16	Lager Beer..	41731	T. F. Courtney & Co., Halifax, N. S.	6 Pts.	90	Anheuser Busch B. Budweiser..... Co., St. Louis, U.S.	
" 16	"	41732	John Tobin & Co., Halifax, N.S.	6 "	75	Pabst Brewing Co., Blue Ribbon..... Milwaukee, U.S.	
" 16	"	41733	Kelley & Glassey, Halifax, N.S.	6 "	75	Jos. Schlitz Br. Co., Milwaukee, U.S.	
" 16	"	41734	Dillon Bros., fax, N.S.	6 "	70	Everard Brewing Co. Red Star..... New York, U.S.	
" 18	"	41735	John McGrath, fax, N.S.	6 "	1.00	Anheuser Busch B. Budweiser..... Co., St. Louis, U.S.	

DISTRICT OF NEW BRUNSWICK—

July 19	Lager Beer..	39506	Simeon Jones, Ltd., St. John, N. B.	3 Bots	25	Canadian Breweries Ekerts. Ltd., Montreal.	
" 21	"	39507	James Ready, Ltd., Fairville, St. John, N. B.	3 "	40	Vendors	
" 22	"	39508	John O'Regan, St. John, N. B.	3 "	40	Jos. Schlitz, B. Co., Schlitz..... Milwaukee, U.S.	
" 23	"	39509	Comeau & Sheehan, St. John, N. B.	3 "	40	Anheuser Busch B. Budweiser..... Co., St. Louis, U.S.	
" 23	"	39510	Wm. E. McIntyre, St. John, N. B.	6 "	60	The Ebling B. Co., Sunlight..... New York, U.S.	

DISTRICT OF QUEBEC—

July 15	Lager Beer..	36777	E. A. Delisle, Cote Genevieve.	29.3 Bots	30	The Beauport Brew- ing Co., Quebec.	
" 15	"	36778	Jules Rochette, Rue Deligny.	7.3 "	35	G. E. Amyot, Que- bec.	
" 15	"	36779	J. B. Cote, 381 Rue St. Jean.	3 "	45	George Patry, Que- bec.	
" 15	"	36780	E. Lafrance, 273 Rue St. Jean.	3 "	45	" "	
" 15	"	36781	" "	3 "	30	G. E. Amyot, Que- bec.	

DISTRICT OF ST. HYACINTHE—

July 19	Lager Beer..	953	S. Gauthier, Farn- ham,	3 Bots	60	The Union Brewery, Kuntz..... Ltd., Montreal.	
" 22	"	954	M. H. Bernier, Vic- torville.	3 "	75	L. Chaput Fils & Budweiser..... Cie., Montreal.	
Aug. 4	"	955	J. F. Chicoine, Rougemont.	3 "	40	Geo. E. Amyot B. B. B..... Co., Ltd., Quebec.	
" 5	"	956	A. H. Hubert, Marieville.	3 "	60	L. Chaput Fils & Blue Ribbon..... Cie., Montreal.	
" 5	"	957	R. Davignon, Iber- ville.	3 "	40	O. Archambault, Salvador..... Iberville.	

LAGER BEER.

Specific Gravity at 15.5°.	Specific Gravity of Dilute at 15.5°.	Specific Gravity of De-alcoholized residue.	RESULTS OF ANALYSIS.										No. of Sample.	Remarks and Opinion of the Chief Analyst.
By Weight	By Volume.	As Proof Spirit.	Alcohol.			Specific Gravity of Original Worts.	Malt Used, Lbs. per Gallon.	Total Solids in Beer determined.	Residual Solids (from tables).	Solids in Original Worts	Degree of Fermentation.	Preservatives.		

R. J. WAUGH, INSPECTOR.

			p.c.	p.c.	p.c.			p.c.	p.c.	p.c.				
1.0153	0.9931	1.0220	3.94	4.93	8.64	1.0503	2.20	5.18	5.49	12.59	56.4	.....	41731	
1.0190	0.9949	1.0247	2.85	3.62	6.54	1.0446	2.01	5.85	6.16	11.16	44.8	.....	41732	
1.0114	0.9931	1.0181	3.94	4.93	8.64	1.0464	2.00	4.18	4.51	11.61	61.1	.....	41733	
1.0166	0.9939	1.0225	3.47	4.34	7.61	1.0171	2.12	5.56	5.61	11.79	52.4	.....	41734	
1.0156	0.9935	1.0222	3.71	4.63	8.13	1.0486	2.18	5.41	5.54	12.16	54.4	.....	41735	

J. C. FERGUSON, INSPECTOR.

1.0101	0.9935	1.0204	3.71	4.63	8.13	1.0468	2.10	4.68	5.09	11.71	56.5	.....	39506	
1.0101	0.9931	1.0169	3.94	4.93	8.64	1.0452	2.03	3.80	4.81	11.31	62.8	.....	39507	
1.0113	0.9930	1.0181	4.00	5.00	8.77	1.0460	2.11	4.10	4.51	11.74	61.6	.....	39508	
1.0161	0.9936	1.0221	3.65	4.56	8.00	1.0481	2.16	5.46	5.51	12.04	54.2	.....	39509	
1.0158	0.9938	1.0215	3.53	4.42	7.74	1.0465	2.09	4.85	5.36	11.63	53.9	.....	39510	

E. BELAND, INSPECTOR.

1.0131	0.9928	1.0201	4.12	5.15	9.04	1.0498	2.24	4.79	5.01	12.47	59.7	.....	36777	
1.0140	0.9925	1.0200	3.47	4.34	7.61	1.0446	2.00	4.84	4.99	11.16	55.3	.....	36778	
1.0161	0.9929	1.0232	4.06	5.08	8.90	1.0524	2.36	5.72	5.79	13.12	55.1	.....	36779	
1.0164	0.9939	1.0226	3.47	4.34	7.61	1.0472	2.11	5.45	5.64	11.81	52.2	.....	36780	
1.0131	0.9938	1.0193	3.53	4.42	7.74	1.0443	1.99	4.59	4.81	11.08	74.6	.....	36781	

J. C. ROULEAU, INSPECTOR.

1.0158	0.9937	1.0222	3.59	4.49	7.87	1.0479	2.15	4.95	5.54	11.94	53.6	.....	953	
1.0153	0.9932	1.0220	3.88	4.85	8.51	1.0499	2.24	5.16	5.49	12.47	64.0	.....	954	
1.0124	0.9934	1.0192	4.00	5.00	8.77	1.0480	2.16	4.44	4.79	12.01	60.1	.....	955	
1.0175	0.9948	1.0227	2.94	3.69	6.47	1.0431	1.94	5.54	5.06	10.78	47.5	.....	956	
1.0114	0.9946	1.0171	3.65	3.83	6.72	1.0384	1.73	4.00	4.26	9.60	55.6	.....	957	

BULLETIN No. 196—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

DISTRICT OF MONTREAL—

1909.							
July 15	Lager Beer..	40250	Reinhardt & Sons, Montreal.	3 Bots	30	Vendors.....	Vienna.....
" 15	" ..	40251	The Nat. Breweries, Ltd., Montreal.	"	25	"	Ekers Bohemian.....
" 19	" ..	40253	B. Ram, 395 St. Lawrence St., Montreal.	"	34	Union Brewing, Ltd., Montreal.	.....
" 19	" ..	40254	G. Daoust, 140 St. Cath. E., Montreal.	5 "	50	Reinhardt & Co., Toronto.	Salvador.....
" 19	" ..	40255	F. X. St. Charles, Ltd St. Gabriel st, Mon	6 "	70	Schlitz, Milwaukee.	Schlitz.....

DISTRICT OF OTTAWA—

Aug. 23	Lager Beer..	41249	The Carling B. & M. Co., Ltd., Ottawa.	6 Pts.	60	Vendors.....	Canada Club.....
" 23	" ..	41250	The Capital B. & M. Co., Ltd., Ottawa.	"	35	"	Capital
" 24	" ..	41251	L. Davis, Ottawa...	"	60	O'Keefe's, Ltd., Toronto.	Pilsener.....
" 24	" ..	41252	Chelsea Trading Co.,	"	75	Unknown.....	Schlitz.....
" 24	" ..	41253	" " ..	"	75	Anheuser Busch B. Co., St. Louis, U.S.	Budweiser

DISTRICT OF KINGSTON—

Aug. 5	Lager Beer..	41165	R. Stevenson, Kingston.	3 Bots	45	Bajus Brewery ..	.....
" 5	" ..	41166	R. J. Lawlor, Kingston.	"	45	Reinhardt & Co., Toronto.	.....
" 5	" ..	41167	J. M. Parland, Kingston.	"	45	Schlitz, Milwaukee.	.....
" 6	" ..	41168	Wesley Bullen, Belleville.	"	45	Carling, London, Ont	.....
" 6	" ..	41169	W. D. Rodbourne, Belleville.	"	45	O'Keefe, Toronto	.....

DISTRICT OF TORONTO—

Aug. 11	Lager Beer..	41334	The Hamilton Brew. Asso. Ltd, Hamilt'n	3 Bots	60	Vendors.....	Regal.....
" 18	" ..	41335	W. J. Donley, 205 Parliament st., Toronto	"	45	Copeland B. Co., Ltd Toronto.	Budweiser C. B. Co., Ltd., C.B. Co.
" 18	" ..	41336	Thos. Walker, 212 Queen st. e, Toronto	"	45	Reinhardt & Co., Toronto.	Bevarian.....
" 18	" ..	41337	T. K. Haffey, 216 Wilton Ave., Toronto.	"	45	The O'Keefe B. Co., Ltd, Toronto.	Pilsener.....
" 19	" ..	41338	D. Hayes, 420 King st. e, Toronto.	"	45	The Korman R. Ltd Toronto.	Perfecto

LAGER BEER.

Specific Gravity at 15° 5r.	Specific Gravity of Distillate at 15° 5r.	Specific Gravity of Dealkoholized residue.	RESULTS OF ANALYSIS.										No. of Sample.	Remarks, and Opinion of the Chief Analyst.
			Alcohol.			Sp. Gravity of Original Worts.	Malt used, lbs. per Gallon.	Total Solids in Beer (determined).	Residue Solids (from tables.)	Solids in Original Worts.	Degree of Fermentation.	Preservatives.		
			By Weight.	By Volume	As Proof Spirit.									

J. J. COSTIGAN, INSPECTOR.

			o.d.	p.c.	p.c.			p.c.	p.c.	p.c.			
1.0085	0.9034	1.0102	3.76	4.71	8.26	1.0371	1.67	2.13	3.54	9.27	72.6	.....	40250
1.0125	0.9938	1.0184	3.53	4.42	7.74	1.0434	1.95	4.34	4.59	10.85	57.6	.....	40251
1.0126	0.9938	1.0189	3.53	4.42	7.74	1.0439	1.97	4.37	4.71	10.98	57.1	.....	40253
1.0090	0.9930	1.0161	4.00	5.00	8.77	1.0449	2.02	3.75	4.01	11.23	64.2	.....	40254
1.0140	0.9937	1.0204	3.59	4.49	7.87	1.0459	2.06	4.80	5.09	11.48	55.6	.....	40255

J. A. RICKEY, INSPECTOR.

1.0147	0.9943	1.0204	3.24	4.05	7.10	1.0431	1.94	4.87	5.09	10.78	52.7	.....	41249
1.0090	0.9934	1.0151	3.76	4.71	8.26	1.0420	1.89	3.35	3.76	10.50	64.2	.....	41250
1.0066	0.9938	1.0146	3.53	4.42	7.74	1.0396	1.78	3.24	3.64	9.90	63.2	.....	41251
1.0115	0.9931	1.0184	3.94	4.93	8.64	1.0467	2.10	4.12	4.59	11.63	60.7	.....	41252
1.0155	0.9932	1.0222	3.88	4.85	8.51	1.0500	2.25	5.12	5.54	12.52	55.7	.....	41253

JAS. HOGAN, INSPECTOR.

1.0100	0.9945	1.0155	3.12	3.90	6.84	1.0373	1.68	3.60	3.86	9.32	58.5	.....	41165
1.0078	0.9925	1.0151	4.31	5.39	9.45	1.0463	2.09	3.65	3.76	11.58	67.5	.....	41166
1.0138	0.9938	1.0204	3.53	4.42	7.41	1.0454	2.04	4.76	5.09	11.36	55.1	.....	41167
1.0114	0.9945	1.0173	3.24	4.05	7.10	1.0400	1.80	3.96	4.31	10.00	56.9	.....	41168
1.0098	0.9937	1.0161	3.59	4.49	7.87	1.0416	1.87	3.81	4.01	10.40	61.4	.....	41169

H. J. DAGER, INSPECTOR.

1.0154	0.9935	1.0220	3.71	4.63	8.13	1.0484	2.18	5.26	5.49	12.11	54.6	.....	41334
1.0124	0.9927	1.0202	4.19	5.24	9.18	1.0504	2.27	4.89	5.04	12.62	60.0	.....	41335
1.0110	0.9926	1.0169	4.31	5.39	9.45	1.0461	2.16	4.42	4.71	12.04	65.0	.....	41336
1.0075	0.9932	1.0132	3.88	4.85	8.51	1.0410	1.85	3.36	3.39	10.26	67.9	.....	41337
1.0051	0.9936	1.0110	3.65	4.56	8.00	1.0370	1.67	2.45	2.74	9.26	70.4	.....	41338

BULLETIN No. 196—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

DISTRICT OF LONDON—

1909.							
July 22.	Lager Beer.	30635	E. J. Watson, Guelph.	3 bots.	25	Holliday.	East Kent Lager.
" 23.	"	30693	Walsh Brothers, Stratford.	"	37	Kuntz & Co., Waterloo.	
" 26.	"	30801	Walter Sault, Goderich.	"	40	Berlin Brewery.	
" 29.	"	30812	Chas. B. Pugh, Clinton.	"	30	Cosgrove Brewing Co., Toronto.	

DISTRICT OF WINDSOR—

" 22.	Lager Beer.	35975	E. B. Smith, London, Ont.	3 bots.	32	H. Kuntz, Hamilton.	
" 23.	"	35976	E. B. Smith, London.	"	33	C. H. Huether, Hamilton.	
" 22.	"	35977	Ed. Shea, London, Ont.	"	35	Kuntz Brewing Co., Waterloo.	
" 22.	"	35978	Ed. Shea, London, Ont.	"	35	Carling B. & M. Co., London, Ont.	
" 22.	"	35979	Scandrett Bros.	"	38	Schlitz Co., Milwaukee, U.S.	

DISTRICT OF MANITOBA—

July 23.	Lager Beer.	39746	Blackwood Limited, Winnipeg.	3 bots.	....	Vendors.	
" 23.	"	39747	P. Shea, Winnipeg.	"	..	McDonagh & Shea, Winnipeg.	
" 23.	"	39748	Lemire & Co., Winnipeg.	"	....	The Moosejaw B. & M. Co., Ltd., Moosejaw, Sask.	

DISTRICT OF CALGARY—

Aug. 5.	Lager Beer.	35574	Lethbridge B. & M. Co., Ltd., Lethbridge.	3 qts.	50	Vendors.	
July 29.	"	35578	Calgary B. & M. Co., Calgary.	"	50	"	
" 29.	"	35579	Golden West B. Co., Calgary.	"	50	"	
Aug. 10.	"	35580	Strathcona E. & M. Co., Strathcona.	"	50	"	
" 10.	"	35581	Edmonton B. & M. Co., Edmonton.	"	50	"	

LAGER BEER.

RESULTS OF ANALYSIS.

Sp. Gr. at 5°15'	Sp. Gr. of Dietil- late at 15°5'	Sp. Gr. of Deal- coloured resi- dues	Alcohol			Sp. Gr. of Original Worts.	Malt used, lbs. per Gallon.	Total Solids in Beer (deter- mined.)	Residual Solids (from tables).	Solids in Original Worts.	Degree of Fer- mentation.	Preservatives.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
			By Weight.	By Volume.	As proof spirit.									
1.0094	0.9940	1.0152	3.41	4.27	7.49	1.0203	1.77	3.40	3.79	9.82	61.4		30685	
1.0164	0.9940	1.0227	3.41	4.27	7.49	1.0463	2.10	5.35	5.66	11.71	51.6		30693	
"	"	"	"	"	"	"	"	"	"	"	"		30801	
1.0157	0.9947	1.0209	3.00	3.76	6.58	1.0418	1.88	4.82	5.21	10.45	50.1		30812	

T. KIDD, INSPECTOR.

			p. c.	p. c.	p. c.			p. c.	p. c.	p. c.				
1.0094	0.9940	1.0152	3.41	4.27	7.49	1.0203	1.77	3.40	3.79	9.82	61.4		30685	
1.0164	0.9940	1.0227	3.41	4.27	7.49	1.0463	2.10	5.35	5.66	11.71	51.6		30693	
"	"	"	"	"	"	"	"	"	"	"	"		30801	
1.0157	0.9947	1.0209	3.00	3.76	6.58	1.0418	1.88	4.82	5.21	10.45	50.1		30812	

JNO. TALBOT, INSPECTOR.

1.0172	0.9939	1.0230	3.47	4.34	7.61	1.0476	2.14	5.41	5.74	11.91	51.8		35075	
1.0131	0.9941	1.0191	3.35	4.20	7.36	1.0427	1.92	4.37	4.76	10.68	55.4		35076	
1.0164	0.9945	1.0221	3.12	3.90	6.84	1.0439	1.97	5.13	5.51	10.98	49.8		35077	
1.0146	0.9943	1.0200	3.24	4.05	7.10	1.0427	1.92	4.70	4.99	10.68	53.3		35078	
1.0096	0.9927	1.0167	4.19	5.24	9.15	1.0469	2.11	3.78	4.16	11.74	64.5		35079	

A. C. LARIVIERE, INSPECTOR.

1.0155	0.9910	1.0208	3.41	4.27	7.49	1.0449	2.02	4.70	5.19	11.23	53.8		39746	
1.0144	0.9938	1.0205	3.53	4.42	7.74	1.0455	2.05	4.62	5.11	11.38	55.1		39747	
1.0180	0.9945	1.0233	3.12	3.90	6.84	1.0451	2.03	5.42	5.81	11.28	4.85		39748	

R. W. FLETCHER, INSPECTOR.

1.0161	0.9942	1.0218	3.29	4.12	7.23	1.0449	2.02	5.32	5.44	11.23	51.5		35574	
1.0137	0.9939	1.0220	3.47	4.34	7.61	1.0466	2.10	5.22	5.49	11.66	52.9		35578	
1.0137	0.9937	1.0199	3.59	4.49	7.87	1.0454	2.04	4.73	4.96	11.36	56.3		35579	
1.0110	0.9936	1.0174	3.65	4.56	8.00	1.0434	1.95	4.05	4.34	10.85	60.0		35580	
1.0151	0.9934	1.0215	3.76	4.71	8.26	1.0484	2.18	5.22	5.36	12.11	55.7		35581	

* Sample not received.

BULLETIN NO. 196—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.		

DISTRICT OF VANCOUVER—

1909.							
July 21.	Lager Beer.	37686	Gold Seal Liquor Co., Vancouver.	3 qts.	50	Victoria Phoenix B. Co., Victoria.	
" 21.	"	37687	J. P. Turner, Vancouver.	"	75	Anheuser Busch B. Association Ltd., St. Louis, U.S.	Budweiser.....
" 21.	"	37688	3 Star Wine Co., Vancouver.	"	50	Dorfes Brewery, Washington.	
" 21.	"	37689	H. A. Urquhart, Vancouver.	"	75	Lemps, St. Louis, U.S.	
" 22.	"	37690	Vancouver Breweries Vancouver.	"	50	Vancouver Breweries Ltd.	Cascade.....

DISTRICT OF VICTORIA—

Aug. 5.	Lager Beer.	41516	Windsor Grocery Co., Victoria, B.C.	3 qts.	75	Anheuser Busch B. Association Ltd., St. Louis, U.S.	Budweiser.....
" 5.	"	41517	Saunders Grocery Co., Ltd., Victoria, B.C.	"	75	America Brewing Co., St. Louis, U.S.	A.B.C. Bohemian....
" 6.	"	41518	Fred. Carne, Victoria, B.C.	"	40	Vancouver Breweries Ltd., Vancouver.	Cascade.....
" 6.	"	41519	D. H. Ross & Co., Victoria, B.C.	"	45	Victoria Phoenix B. Co., Victoria, B.C.	Victoria Phoenix Export.
" 6.	"	41520	D. H. Ross & Co., Victoria, B.C.	"	60	Seattle B. & M. Co., Seattle, U.S.	Rainier Beer.....

LAGER BEER.

RESULTS OF ANALYSIS.

Sp. Gr. at 15.5°.	Sp. Gr. of Distillate at 15.5°.	Sp. Gr. of Decolored residue.	Alcohol.			Sp. Gr. of Original Wort.	Malt used, lbs. per Gallon.	Total Solids in Beer, (determined).	Residual Solids (from tables).	Solids in Original Wort.	Degree of Fermentation.	Preservatives.	No. of Sample.	Remarks and Opinion of the Chief Analyst.
			By Weight.	By Volume.	As proof spirit.									

J. F. POWER, INSPECTOR.

			p. c.	p. c.	p. c.		p. c.	p. c.	p. c.					
1.0115	0.9935	1.0181	3.71	4.63	8.13	1.0445	2.00	4.19	4.51	11.13	59.5	.....	37686	
1.0153	0.9931	1.0217	4.00	5.00	8.77	1.0600	2.25	5.44	5.41	12.52	56.8	.....	37987	
1.0118	0.9928	1.0193	4.12	5.16	9.01	1.0402	2.21	4.81	4.81	12.31	60.0	.....	37688	
1.0090	0.9924	1.0165	4.37	5.47	9.58	1.0482	2.17	3.80	4.11	12.06	65.7	.....	37689	
1.0153	0.9923	1.0228	4.44	5.55	9.72	1.0550	2.47	5.34	5.60	13.78	68.7	.....	37690	

D. O'SULLIVAN, INSPECTOR.

1.0151	0.9934	1.0219	3.76	4.71	8.26	1.0488	2.20	5.27	5.46	12.21	55.2	.....	41516	
1.0130	0.9929	1.0198	4.06	5.08	8.90	1.0490	2.20	4.07	4.94	12.26	59.7	.....	41517	
1.0102	0.9930	1.0234	4.00	5.00	8.77	1.0522	2.35	5.68	5.84	13.07	55.3	.....	41518	
1.0127	0.9943	1.0180	3.24	4.05	7.10	1.0407	1.83	4.34	4.49	10.18	65.9	.....	41519	
1.0125	0.9924	1.0202	4.37	5.47	9.58	1.0471	2.12	4.57	5.04	11.79	57.2	.....	41520	